CHAPTER 5

Regulatory and Policy Recommendations

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Background and Context of Chapter

This chapter contains 25 regulatory and policy recommendations designed to provide local governments with a starting point for evaluating, updating, or improving enforcement of policies and regulations that are linked to salmon conservation. As guidance, these recommendations can be used by local governments to prioritize what components of each jurisdiction's overall regulatory and policy framework may need to be assessed and modified. This list has been created to apply to a broad range of regulations and policies in most jurisdictions and still be consistent with the factors of decline for salmon habitat in the Lake Washington/Cedar/ Sammamish Watershed. For a list of example ordinances, reference documents, and other resources to assist in implementing these recommendations, please see Chapter 8, Implementation Resources.

While on-the-ground projects and outreach recommendations found elsewhere in the Action Agenda are important components of the region's salmon conservation efforts, they are only some of the pieces of a much larger salmon conservation puzzle. Evaluating, updating, and consistently enforcing existing regulations and policies is another crucial piece of this puzzle, because effective laws and policies help prevent habitat loss.

Utility, surface water management, and land use staff from many of the jurisdictions in the Lake Washington/Cedar/Sammamish Watershed (see Chapter 9, Acknowledgements, for the WRIA 8 Staff Committee roster) worked together to refine the majority of these recommendations from an original list of 144 possible suggestions for regulatory and policy guidance. The original list was assembled from two main sources: (1) recommendations from the interjurisdictional WRIA 8 Technical Committee and (2) the Regulatory Recommendations section of WRIA 7's *Draft Snohomish River Basin Chinook Salmon Near-Term Action Agenda* (Snohomish Basin Salmon Recovery Forum 2001). Some of the recommendations from the original list were eliminated because they were redundant, while others were determined not to be regulatory or policy guidance. The remaining alternatives were assessed according to their ability to address the following factors:

- The WRIA 8 Steering Committee's scope for the Action Agenda
- The purposes listed in the Introduction (Chapter 1)
- The ability to be implemented in the 5-year time frame
- Compatibility and coordination with existing efforts such as the Growth Management Act, Shoreline Management Act, and other broad policy regulations that affect salmon conservation.

Some recommendations were also included in response to comments made during the public review process.

There are 10 categories of regulations in the Action Agenda. In alphabetical order, they are:

1. Clearing and grading
2. Fish passage barriers
3. Floodplain alterations
4. Land use
5. Retention of large woody debris
6. Road maintenance
7. Shoreline modifications
8. Stormwater
9. Variances and reasonable use exceptions
10. Wetlands.

Additional time, analysis, and discussion will be needed to address three other categories: channel migration zones, groundwater, and infrastructure.

Recommendations

The 25 recommendations below offer guidance for local governments to consider as they review their regulations and policies for compliance with the Endangered Species Act. In addition, jurisdictions need to review their current regulations to determine if they are enforced in a manner adequate for salmon conservation. If regulations are not sufficiently enforced, jurisdictions should endeavor to do so.

Clearing and Grading

Clearing and grading activities have a negative impact on salmon habitat in a variety of ways, including altering hydrology, increasing sediment runoff into streams and rivers, and removing necessary vegetation from riparian areas. These recommendations assist in addressing the following factors of decline identified by the WRIA 8 Technical Committee: altered hydrology and flow, poor water quality, and increased sedimentation and altered sediment transport processes.

1. Adopt a clearing and grading ordinance or site alterations ordinance. These ordinances should set seasonal clearing restrictions that severely limit clearing and grading activities from October to April. Critical areas, including sloped and riparian areas, should not be exposed during this time.

2. Support forest retention and impervious surface restrictions for rural areas in order to maintain hydrologic function.

3. Implement forest retention and restoration mechanisms from other environmental protection codes (such as critical areas ordinances and development regulations for open space retention).

4. Reduce excess nutrient loading in areas that are sensitive to excessive nutrient loading or excessive primary production.

5. Minimize alterations to nearshore processes and functions.

Fish Passage Barriers

Barriers to fish passage – such as culverts, dams, and weirs – prohibit fish from reaching historical spawning grounds. The Washington Department of Ecology estimates that 3,000 miles of salmon spawning habitat in Washington state are blocked by culverts alone. This recommendation assists in addressing the following factor of decline: fish access and passage barriers.

1. Ensure that all proposed projects allow for fish passage at all stages of the salmon life cycle as well as support stream flows and transport of sediment and organic matter at stream crossings. Temporary structures, such as fish collection weirs, should be evaluated in the permitting process on a case-by-case basis.

Floodplain Alterations

Flood control efforts, bank stabilization projects, and other development activities in floodplains can affect salmon by altering hydrologic regimes. The following recommendations assist in addressing these factors of decline: altered hydrology and flow, poor water quality, loss of channel complexity and connectivity, and fish access and passage barriers.

1. Incorporate bioengineering techniques (including the placement of large woody debris) that protect and enhance salmon habitat into flood control and bank stabilization measures undertaken by local governments and other parties.

2. Permit new development in the floodplain only when it has been demonstrated that the new development will not:

   - Increase flood elevations
   - Decrease storage capacity
   - Restrict the natural erosion and accretion processes associated with channel migration
   - Impair natural channel condition
   - Restrict adult or juvenile access to habitat at any flow level.

   In addition, it should be demonstrated that no feasible alternative to development activity exists. If development is allowed in the floodplain, restoration and enhancement may be necessary.

Land Use

Land use and development patterns have contributed to the degradation of salmon habitat in numerous ways, including affecting the timing, quantity, and quality of runoff; causing increased sediment loading into streams and rivers; and removing important vegetation from riparian areas. These recommendations assist in addressing the following factors of decline: altered hydrology and flow, poor water quality, and increased sedimentation and altered sediment transport processes.

1. Before finalizing comprehensive plan land use designations and zoning, evaluate the probable cumulative habitat impacts of new roads and infrastructure needed to serve areas if built out under different zoning scenarios.

2. Minimize the amount of new impervious surface and reduce existing impervious surface in redevelopment when feasible.

3. Avoid the creation of high-density residential developments or commercial centers outside established urban growth areas.

4. Do not expand urban growth areas into floodplains.

5. Minimize alterations to nearshore processes and functions.

Retention of Large Woody Debris

Large woody debris in streams, rivers, and nearshore areas performs a number of functions important to salmon and the aquatic habitats on which they depend. These include regulating

sediment and stream flow; supplying nutrients necessary to the ecosystem; providing habitat for insects upon which salmon prey; and forming critical complex habitats, such as pools and refuge areas for juvenile salmon. This recommendation assists in addressing the following factors of decline: poor water quality and loss of channel complexity and connectivity.

1. Prohibit the removal of in-channel large woody debris as well as large woody debris on adjacent banks, except in situations where public health and safety or significant infrastructure are threatened. In these cases, relocate large woody debris to sites (preferably within the same subarea) where it can provide similar benefits.

Road Maintenance

Road maintenance activities can have an impact on salmon habitat in numerous ways, including blocking upstream passage, disconnecting floodplains, limiting channel migration capability, and increasing runoff and sedimentation in streams, rivers, and lakes. The following recommendation will assist in addressing these factors of decline: fish access and passage barriers, loss of channel complexity and connectivity, increased sedimentation and altered sediment transport processes, and poor water quality.

1. Roads should be maintained in accordance with the Regional Road Maintenance Endangered Species Act Program guidelines.

Shoreline Modifications

Natural marine and freshwater shorelines provide essential rearing and migration habitat for salmon by supplying organic inputs, keeping water temperatures cool, preventing non-point source pollution from entering waterways, and offering refuge. These recommendations assist in addressing the following factors of decline: poor water quality, loss of channel complexity and connectivity, increased sedimentation and altered sediment transport processes, and degradation of riparian conditions.

1. Avoid new bank-hardening projects in locations where natural bank conditions currently exist. Where and when opportunities allow, remove existing hardened bank stabilization projects or retrofit them with softer, more environmentally compatible bank treatments to increase riparian functional values. Minimize construction, fill, armoring, dikes, and overwater structures that would either disrupt normal migration rates and patterns or limit access to shallow feeding and refuge areas.

2. In areas of new development or redevelopment, establish, enhance, restore, or protect appropriately sized riparian buffers around rivers, streams, wetlands, lakes, and nearshore areas, to ensure that salmon conservation is not compromised. Base these buffers on scientific data,

principles of landscape ecology, principles of ecosystem and conservation biology, and long-term feasibility. Require riparian buffers to be reestablished and replanted during redevelopment of streamside properties.

3. Ensure that any variances and reasonable-use exceptions issued do not undermine the ecological functions and values that regulations are trying to protect. Monitor variances and reasonable-use exceptions for cumulative effects on achieving ecological objectives. If necessary, provide funds to purchase property or development rights to ensure protection of the land.

4. Strive to maintain the existing natural shorelines of rivers, lakes, and nearshore areas by evaluating the adequacy of existing policies and regulations (and enforcement) in protecting these areas and shallow water habitats used by juvenile salmon. Adopt critical area regulations and shoreline management master plans.

Stormwater

Stormwater runoff can negatively affect salmon by transporting contaminants into river, stream, and nearshore systems, and by altering natural hydrologic flows. These recommendations can assist in addressing the following factors of decline: altered hydrology and flow and poor water quality.

1. In areas of new development or redevelopment, manage stormwater to preserve natural hydrographs through reduced-impact development standards, such as best management practices and site design requirements that incorporate active stormwater management.

2. Develop and implement stormwater management programs that more closely emulate natural hydrologic processes and protect water quality. Such programs should outline development activity standards for both construction and post-construction phases, including management of stormwater runoff and maintenance of stormwater facilities.

Variances and Reasonable-Use Exceptions

Variances and reasonable-use exceptions can decrease protection of salmon habitat intended by jurisdictional regulations and policies. When multiple applications are granted in particular areas, the negative cumulative impacts multiply geometrically. The following recommendation can assist in addressing these factors of decline: altered hydrology and flow, poor water quality, increased sedimentation and altered sediment transport processes, loss of channel complexity and connectivity, and degradation of riparian conditions.

1. Ensure that any variances and reasonable-use exceptions issued do not undermine the ecological functions and values that regulations are trying to protect. Monitor variances and reasonable-use exceptions for cumulative effects on achieving ecological objectives. If necessary, provide funds to purchase property or development rights to ensure protection of the land.

Wetlands

Wetlands perform a variety of functions that are essential to salmon, including water-quality enhancement and food production. These recommendations can assist in addressing the following factors of decline: altered hydrology and flow and poor water quality.

1. Protect existing wetlands and their buffers. The goal should be no net loss of function and acreage.

2. When feasible, enhance or restore riparian areas surrounding wetlands where functions have been lost or compromised.

3. Wetland mitigation should be considered only after it has been demonstrated that local government cannot legally prohibit alteration to a wetland. In these cases, the state's mitigation sequencing approach should be used, which starts with avoidance and minimization of impacts on all functions for the long term. Mitigation should occur in the same subbasin.

Additional Issues to Address

As previously mentioned, additional time, analysis, and discussion will be needed to address at least three other regulatory categories: channel migration zones, groundwater, and infrastructure. Land use variances and reasonable-use exceptions, though discussed in this document, need more attention. Many jurisdictions have ordinances for setbacks, buffers, and critical area designations, as well as other policies and regulations that effectively benefit salmon. However, land use variances and reasonable-use exceptions have allowed encroachment into habitat and cumulatively can negate the original intention of the ordinances and regulations. More work needs to be done to identify why and when variances and exceptions are allowed, what the barriers are to restricting them, and how to improve the current system to better protect the resources as the ordinances and regulations are intended to do.